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ABSTRACT

This paper describes a three-year staff development program in reading and social studies in San Antonio, Texas. The data from a reading test administered to a sample of high school students indicated inferior reading skill development and supported the teachers' contentions that their students could not master social studies material because they could not read them. To attack this problem, a staff development program that would train teachers in functional reading skills and in specific content area skills was devised and implemented. Twelve high school and nine middle grade teachers participated in the program. There was an intensive one week preschool workshop in which prescriptive and diagnostic tools in reading and the social studies were introduced. Bi-monthly inservice meetings and monthly classroom observations of participant performance were part of the program. Participants also developed social studies materials written at appropriate grade levels. The results of the project indicate: 1) that student performance in functional reading skills can be increased by training teachers in these skills; 2) a developmental model of inservice training provides a successful design in which teachers can work; and 3) intensive content methodology instruction is needed beyond the basic preservice courses now in effect. (Author/RM)

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An Analysis of a Staff Development Training Program in Reading and Social Studies

A Paper Presented to the Annual Meeting

of

The Southwest Educational Research Association
February 8, 1980
San Antonio, Texas

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This paper presents an analysis of a staff development program in reading and social studies that is now entering its third year in the Harlandale Independent School District (San Antonio). This presentation will discuss: (1) the need and rationale for this project; (2) the inservice model used in implementing activities; (3) teacher reactions to the training; and (4) pupil achievements for the first two years of the project.

Need and Rationale

Reading and content area standard test scores begin to decline dramatically at the fourth grade level in the Harlandale School District. One theory as to the cause of this deterioration in standardized measures, was that after the fourth grade reading becomes a functional process rather than a developmental one. With this change, and as an active corollary to it, content teachers in middle and high schools have little, if any, training in either developmental or functional reading skills. Since reading is a necessary process vehicle in most classes at the middle and high school level, content also is affected.

In the winter of 1975-76, a group of secondary social studies teachers from the Harlandale Independent School District in San Antonio, Texas, approached personnel from The University of Texas at San Antonio to discuss inadequacies of their students' performance in reading and social studies. Several meetings were held during which a number of problems relating to social studies skill development were explored. The most serious weakness identified was the students' difficulty in handling textbook and supplementary reading

assignments. Moreover, the teachers admitted they had neither preparation in nor programs for solving the problem.

As investigation of curricular problems proceeded, it became apparent that the totality of academic achievement in Harlandale was being affected by low reading performance, and that an inservice program to train content area teachers in methods for improving reading comprehension and study skills was essential. Input gathered from the principal of one of the district schools and the assistant principal of another, counselors from both schools, the district reading specialist, the district social studies coordinator, the district secondary coordinator, and the superintendent resulted in the decision that, because of the relationship between reading and social studies and because of the complexities and cost of a crash district-wide program, that reading training should be initiated with the social studies faculty. In this design, a specified group of teachers could develop a set of skills which they could then disseminate to other members of the faculty, including upper grade elementary and middle school personnel. This type of program would provide that most cost-efficient means for addressing the problem at all levels in this district.

As well as basing the project on subjective data regarding student performance gleaned from interviews with social studies teachers, district reading and curriculum specialists, and administrators, empirical data was gathered from an administration to a sample of the Harlandale student population (N=297) of The Nelson

Denny Reading Test. The results of this testing indicated the following:

Grade	Percentile Rank Vocabulary	Percentile Rank Comprehension
9	14	4
10	13	3
11	11	2.5

Twelfth graders were excluded from this sample since they would have graduated when the program was instituted. The data indicated demonstrably inferior reading skill development among Harlandale students and supported the teachers' contentions that their students could not master social studies material because they could not read them.

To attack reading and social studies deficits concurrently would be responsive to data gathered by the National Assessment of Educational Progress (1975, 1976) which indicated difficiencies in both these areas from ages nine through age seventeen. Content mastery in the social studies makes it imperative that students read and comprehend material presented to them. Moreover, many of the skills fostered within the social studies (e.g., analysis, synthesis, critical thinking) are identical with reading skills (Berg, 1973). Even activities traditionally considered to be nonreading such as map reading and chart interpretation correlate positively with reading comprehension scores ($R=.22$, $p < .01$) (Fairweather & Schnitz, 1976). Described in terms of taxonomy, there are direct relationships in knowledge, comprehension, application,

analysis, synthesis and evaluation (Bloom, 1956, and Guszak, 1972).

Inservice Model

To attack this problem a staff development program that would train teachers in functional reading skills and in specific content area skills was devised. Funded through a grant from Title IVC of the Elementary and Secondary Education Act (ESEA), the Harlandale Integrated Reading Content Instructional Program (HIRCI) used the McLaughlin-Berman (1977) Developmental Model of Staff Development Training to implement teacher behavior change. This model, used throughout the project, called for active input from participants in goal setting, planning, methodological constructs and in on-going evaluation of the project.

It had at its core: (1) an intensive one week pre-school workshop in which prescriptive and diagnostic tools in reading and the social studies were introduced; (2) bi-monthly inservice meetings for participants which continued the pre-school training and in which evaluation of methodology were discussed; (3) monthly classroom observations of participant performance; (4) development of social studies materials written at appropriate grade levels; and (5) constant "on-line" planning that would establish if the project was succeeding.

The diagnostic techniques presented to these teachers centered around: (a) determining factors of textual readability (b) mastering readability formula, notably the Fry Graph and SMOG Scales, for use in determining suitability of textual material for classroom use; (c) implementing the CLOZE (Bormouth, 1963)

triage within their classrooms to determine levels of student comprehension of textual material and (d) use of the San Diego Quick Assessment in vocabulary development.

Prescriptive methodological tools that were introduced included both social studies and reading devices. These were: (a) Hypothesis Generating and Inquiry Techniques, including the Directed Reading and Thinking Activity (Stauffer, 1975), the Interrupted Film Technique, role play, case study, mock trials, and the development of comprehension guides; (b) study and note-taking techniques, including the SQ3R (study, question, read, review, recite) method; (c) the use of concepts in vocabulary (Lee, 1975), and (d) guides to rewrite and develop materials at appropriate grade/reading levels.

Twelve social studies teachers from the two high schools in the district elected to join the first year of the project (1977-78). This number represented 48% (12/25) of the total population of high school social studies teachers within the district. All grade levels (9-12) were represented as were all phases of the social studies curriculum (U.S. History, World Geography, World History, American Government, Free Enterprise, Sociology and Psychology). Only one teacher from this group dropped out of the project during the year.

The second year of the project (1978-79) added nine middle school (grades 6-8) social studies teachers to the original

cadre. All middle school grade levels were represented. These teachers went through the same training as the first year teachers with one exception, that being that some first year teachers were used as part of the training staff. This concept was gleaned from the Triple T model in which teachers are trained as trainers for other teachers.

Upon completion of the first two years of the project seventeen of the twenty-one trainees remained. Of those who had dropped out, one had left the district for another job, while the others remained as classroom teachers.

Activities and Reactions to Training

In working toward the project objectives, it became clear that the Harlandale teachers were correct in their subjective assessments of their students' learning problems. Readability formula (Fry and SMOG) indicated that the adopted textbooks in the district were all written at or above grade level. Magruder's American Government, for instance, tested out at 14.5 grade, while Men and Nations: A World History tested out at 11.0 grade. CLOZE procedure applications indicated that very few students read their texts at the independent level, and fewer than one-third read at the instructional level. Early observations of the teachers by the project consultants indicated concern about academic performance, but revealed an absence of knowledge above corrective procedures. Typically, instruction was carried out by lecture, at times augmented by notes or diagrams projected

on an overhead; by in-class reading assignments occasionally performed in conjunction with worksheets, or by film. Project teachers acknowledged their limitations though, and demonstrated high interest and cooperation in performing the tasks set for them in the workshops in an active attempt to improve the quality of student performance.

Training the teachers in corrective procedures clarified and refocused previously identified problems. The tendency of teachers to present information and to use a single textbook inhibited the success of the program to the extent of full implementation of corrective practices. Teachers were reluctant to face the need to individualize instruction, or at least to restructure their classes in terms of CLOZE triage. Teachers also needed stronger convictions about the efficacy of inquiry strategies before students experienced their benefits.

The use of film and filmstrips persisted as a problem, too, since teachers presented them as a substitute for lecture. The utilization of the interrupted film technique as an adjunct to the Directed-Reading-Thinking Activity (Stauffer, 1975) and hence as an instructional procedure to enhance comprehension skills through advanced organizers and hypothesis testing, was emphasized to change this practice.

The introduction of concept development as an alternative to the presentation of social studies terms in definitional format had some impact on instructional practices, but the use of definitional formats persisted. Teachers recognized different levels of questions in terms of Bloom's Taxonomy, as well as the nature of adjunct questions, but the planned use of the former did not

appear in classroom instruction regularly.

Teachers reported that the student response was generally positive towards rewritten material and that the simultaneous use of rewritten materials with the text was profitable. Certain problems in the administration of the rewritten materials did present themselves. In one workshop session, early in the project, teachers expressed confusion over whether or not the rewritten materials were consumable. All agreed that using the materials as consumables were preferable to treating them as inviolable texts; however, the cost of doing so was prohibitive in terms of the project becoming self-sustaining at district expense. Consequently, the rewritten materials were used in class sets.

Teachers also seemed to employ the rewritten materials more readily when they shared in the authorship. Organizationally, the process of rewriting was altered to provide a structure for each participating teacher to evaluate, modify and achieve compromise on all rewritten texts.

Both groups, in both years, were also allowed to order supplemental classroom materials as part of the grant award. These were chosen on an individual school need basis. That is, some monies were pooled for ordering classroom sets, while individual teachers also ordered material specific to their own needs. Criteria for orders was based on readability and suitability of the materials.

Project Evaluation

To determine the effectiveness of the program two methods of evaluation were used. The first method was an interview/questionnaire, by outside evaluators, of the teacher participants. The results of these were contrasted with actual classroom observation. The resultant findings of these evaluations showed that: (1) teachers liked the format and model of this project; (2) the techniques most widely used involved methods in which teachers could diagnose student and textual deficiencies (CLOZE procedures, San Diego Quick Assessment, Fry Graph, SMOG Procedure); (3) the techniques most frequently misunderstood and little used were those in which teachers would have to change entire teaching strategies (Inquiry, SQ3R for example). Evaluations of early workshop presentations given by the teachers indicated that only one teacher viewed inquiry as exceptionally beneficial (7 on a scale of 7), while five teachers viewed inquiry as relatively ineffective or too difficult for their students (1-4 on a scale of 7). Lecture did not need to be abandoned, but teachers needed to become proficient at using both visual and experiential illustrations, advanced organizers, questioning techniques and organizational patterns favorable to notetaking in their lectures.

Though teachers worked with the DRTA, the SQ3R, notetaking, concept development and questioning techniques, classroom observations and evaluation instruments suggested incomplete

mastery. The DRTA was the most widely accepted reading technique by the teachers (1 on a scale of 5 by 4 teachers out of 12, and 2 on the same scale by 7 teachers), but was not used on a regular basis. Teachers demonstrated that they understood, but rarely employed it and (4) once a teacher formed a technique he/she liked, that technique was probably the one that would be used exclusively, often to the detriment of the class.

The second criteria of evaluation for this project was pupil achievement . The criterion variable for the product evaluation was the students' performance on the Iowa Test of Educational Development for the first year (1977-78). Variance of the criterion variable was partitioned examining the contributions of: (a) pre-test scores on an alternate form of the same instrument, (b) ethnicity of the students, (c) grade, (d) experience of the teachers, and (e) a contrast-coded variable reflecting teacher participation in the project. Hierarchial rather than stepwise entry of variables into the regression equation was used. The second year of the project used the California Test of Basic Skills as this variable. The reason for this switch was due to district testing policy changes.

Data analysis procedures of any complexity serve almost exclusively product evaluation. The impact of this program upon the student population was assessed by means of a multiple regression analysis design. Several factors inherent in this project strongly motivated its use. First, as with most educational

research, the complexity of the variables operating and interacting within a classroom setting is enormous. Second, student transence prevented the maintenance of proportional cell sizes required for most traditional analysis of variance or analysis of co-variance designs. Multiple regression analysis was far more elastic with respect to violations of these and other assumptions and hence, permitted unimpeded investigation in spite of changes within the data pool (Cohen and Cohen, 1975).

Those scores for students whose teachers participated in the program provided a criterion variable against which contrast variables representing their teachers' mastery of particular objectives was regressed. In this fashion, the most significant aspects of the program in the sense of explaining portions of the variance of student reading and social studies scores was isolated. Three sub-tests, vocabulary development, reading comprehension, and social studies were selected as specific measures who students scores would be used in analyzing the effectiveness of this program.

Using experimental control group design, results from the first year, with multiple regression analysis in use, showed a slight (4.673) F ratio increase in student performance in one of the high schools from those in the experimental group. Results of the second year's testing are pending, but indicate an even greater increase in student performance for the experimental group.

Some Summary Thoughts

All staff development projects are faced with the same problem in measuring success; namely, how do you know when, and if, teacher behavior has been modified enough to effect student performance? In this project there is some statistical evidence to indicate that, yes, performance rose for those students whose teacher participated in this program. But, how long will the effects last? Can these changes stay with both teachers, and students, over a long term period?

The results of this project would seem to indicate: (1) that student performance in functional reading skills can be increased by training teachers in these skills; (2) a developmental model of inservice training provides a successful design in which teachers can work in; and (3) intensive content methodology instruction is needed beyond the basic pre-service courses now in effect.

Another notion that can be stated with some certainty, is that after exposure to this type of training program these social studies teachers realized that their goals, both for content and process, were the same as the goals for reading comprehension. Considering the reliance on print materials in most social studies classrooms, this is an important breakthrough, as improved reading comprehension can only improve social studies learning.

One of the fears teachers express time and again is that coping with reading comprehension problems will detract from the coverage of required course content. If coverage means that students are meeting the objectives for the course, including mastery of informational points, concepts, generalizations and processes, then coping with reading comprehension problems can only enhance the coverage of required content. The question this project asks is can any secondary content area teachers afford not to devote time to developing their students' reading comprehension skils if they are to truly serve their student's needs.

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